

IN THE CLAIMS

This listing of the claims replaces all prior versions of the claims in the application.

Listing of the Claims

1. (Withdrawn) An isolated polypeptide selected from the group consisting of:
 - a) a polypeptide comprising an amino acid sequence of SEQ ID NO:1,
 - b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to an amino acid sequence of SEQ ID NO:1,
 - c) a biologically active fragment of a polypeptide having an amino acid sequence of SEQ ID NO:1, and
 - d) an immunogenic fragment of a polypeptide having an amino acid sequence of SEQ ID NO:1.
2. (Withdrawn) An isolated polypeptide of claim 1, having a sequence of SEQ ID NO:1.
3. (Withdrawn) An isolated polynucleotide encoding a polypeptide of claim 1.
4. (Withdrawn) An isolated polynucleotide encoding a polypeptide of claim 2.
5. (Withdrawn) An isolated polynucleotide of claim 4, having a sequence of SEQ ID NO:2.
6. (Withdrawn) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.
7. (Withdrawn) A cell transformed with a recombinant polynucleotide of claim 6.

8. (Withdrawn) A transgenic organism comprising a recombinant polynucleotide of claim 6.
9. (Withdrawn) A method for producing a polypeptide of claim 1, the method comprising:
- a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and
 - b) recovering the polypeptide so expressed.
10. (Withdrawn) A method of claim 9, wherein the polypeptide has the sequence of SEQ ID NO:1.
11. (Withdrawn) An isolated antibody which specifically binds to a polypeptide of claim 1.
12. (Withdrawn) An isolated polynucleotide selected from the group consisting of:
- a) a polynucleotide comprising a polynucleotide sequence of SEQ ID NO:2,
 - b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to a polynucleotide sequence of SEQ ID NO:2,
 - c) a polynucleotide complementary to a polynucleotide of a),
 - d) a polynucleotide complementary to a polynucleotide of b), and
 - e) an RNA equivalent of a)-d).
13. (Withdrawn) An isolated polynucleotide comprising at least 60 contiguous nucleotides of a polynucleotide of claim 12.
14. (Currently Amended) A method for detecting a target polynucleotide in a sample, said target polynucleotide ~~having a sequence of claim 12, the method comprising, selected from the group consisting~~ of:
- a) a polynucleotide comprising a polynucleotide sequence of SEQ ID NO:2,

- b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to a polynucleotide sequence of SEQ ID NO:2,
- c) a polynucleotide complementary to a polynucleotide of a),
- d) a polynucleotide complementary to a polynucleotide of b), and
- e) an RNA equivalent of a)-d); the method comprising:
 - [[a]] i) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and
 - [[b]] ii) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

15. (Original) A method of claim 14, wherein the probe comprises at least 60 contiguous nucleotides.

16. (Currently Amended) A method for detecting a target polynucleotide in a sample, said target polynucleotide ~~having a sequence of a polynucleotide of claim 12, the method comprising:~~
selected from the group consisting of:

- a) a polynucleotide comprising a polynucleotide sequence of SEQ ID NO:2,
- b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to a polynucleotide sequence of SEQ ID NO:2,
- c) a polynucleotide complementary to a polynucleotide of a),
- d) a polynucleotide complementary to a polynucleotide of b), and
- e) an RNA equivalent of a)-d); the method comprising:
 - [[a]] i) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and
 - [[b]] ii) detecting the presence or absence of said amplified target polynucleotide or

fragment thereof, and, optionally, if present, the amount thereof.

17. (Withdrawn) A composition comprising a polypeptide of claim 1 and a pharmaceutically acceptable excipient.

18. (Withdrawn) A composition of claim 17, wherein the polypeptide has an amino acid sequence of SEQ ID NO:1.

19. (Withdrawn) A method for treating a disease or condition associated with decreased expression of functional SAM-MT, comprising administering to a patient in need of such treatment the composition of claim 17.

20. (Withdrawn) A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
- b) detecting agonist activity in the sample.